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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,766	08/03/2001	Philippe R. Morin	9432-000141	8751
27572	7590	05/02/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			LERNER, MARTIN	
			ART UNIT	PAPER NUMBER
			2654	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/921,766	MORIN ET AL.	
	Examiner Martin Lerner	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 January 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 2, 4 to 14, and 16 to 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1, 2, 4 to 14, and 16 to 26 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06/21/2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 4 to 14, and 16 to 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claims 1 and 10, and dependent claim 25, as amended, the term "exactly" raises issues as to indefiniteness under 35 U.S.C. §112, Second Paragraph, as the scope of exactness in echoing back audio feedback is indefinite. There must always be some difference between received input utterances and echoed input utterances. Either the echoed input utterances are speech synthesized, in which case they must sound significantly different from spoken human utterances, or the echoed input utterances are audio recordings, in which case they must still sound somewhat different from the original spoken human utterances due to the imperfect nature of audio recording. Here, Applicants are attempting to convey that the echoed utterances have the same words in the blocks of text as the input utterances, but Applicants do not have support for the limitation in the Specification. Thus, the scope of "exactly" is indefinite on its face to one having ordinary skill in the art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 13, 14, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by *Takebayashi et al.*.

Regarding independent claim 10, *Takebayashi et al.* discloses an article of manufacture for data entry by voice, comprising:

“an operating system” – processing unit 291 contains an operating system (column 29, lines 49 to 56: Figure 45);
“a memory in communication with said operating system” – memory 292 (column 29, lines 29 to 56: Figure 45);

“a speech recognition means in communication with said operating system” – speech understanding unit 11 (column 6, lines 44 to 50: Figure 1);

“a speech generation means in communication with said operating system” – response generation unit 13 (column 7, lines 23 to 43: Figure 1);

“a dialogue history maintenance means in communication with said operating system” – (column 6, lines 50 to 57);

“wherein said operating system manages said memory, said speech recognition means, said speech generation means, and said dialogue history maintenance means

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in a manner permitting the user to monitor speech recognition of an input utterance by means of a generated speech corresponding to at least one of field-specific values and commands contained within the phrase formed by spotted words within the input utterance, and to perform editing operations and correction operations on all active fields, wherein audio feedback echoing at least one of recognized values and recognized commands is performed upon interpretation of each input utterance, and a sequence of the recognized values echoed in the audio feedback exactly reflects a sequence of the spotted words within the input utterance from which the recognized values are obtained" – keyword detection unit 21 (column 8, line 55 to column 9, line 22: Figure 2); keywords are received in a word lattice or frame format ("field-specific values"), e.g. "three" "hamburgers" (column 10, lines 6 to 17: Figure 4); keywords include commands such as "order", "cancellation", and "replacement" ("to perform editing operations and correction operations") commands (column 10, lines 18 to 24: Figure 5; column 6, lines 50 to 57); the multimodal response output generated such that the speech response for the confirmation message of "Your orders are one hamburger, two coffees, and four large colas, right?" is outputted from the loudspeaker unit 15 (column 13, lines 41 to 50: Figure 12C); an order contains both "values" and "commands", as the values are the numbers and types of each item ordered, and the order is a command to provide the items ordered; for a situation in which one hamburger and one cola has already been ordered, the confirmation is "Your orders are one hamburger and one cola, right?" (column 22, lines 18 to 25: Figure 30B); order confirmation messages are "audio feedback echoing" values and commands; for an

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order of one hamburger and one cola, the audio confirmation message "exactly reflects a sequence of the spotted words in the input utterance" by correctly identifying each item ordered in the same sequence it was ordered.

Regarding claim 13, response generation unit 13 generates the speech response in a synthesized voice (column 7, lines 23 to 43: Figure 1).

Regarding claim 14, syntactic and semantic analysis unit 21 determines keywords by semantics (column 6, lines 44 to 50; column 9, lines 38 to 50).

Regarding claims 17 and 20, correction commands include "cancellation" commands for deletion of a last entry, e.g. "That's Wrong" and "Cancel" (column 10, lines 18 to 24: Figure 5) and deletion confirmation (Figure 15B).

Regarding claim 19, editing operations include "replacement" commands "Rather" and "Instead" (column 10, lines 18 to 24: Figure 5) and replacement confirmation (Figure 15B).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Takebayashi et al.* in view of *LaRue*.

Concerning claims 11, and 12, *Takebayashi et al.* omits a backup input system as a keyboard or touch screen. However, *LaRue* teaches a speech recognition system including a keyboard and an input panel 36 to enhance the ability to communicate audibly in a man-machine interaction. (Column 1, Lines 19 to 27; Column 4, Lines 36 to 39; Column 13, Lines 62 to 63; Figure 2) Including an additional input device in a speech recognition system is generally well known for the purpose of providing flexibility by permitting a plurality of modes of input or when one input device fails to operate. It would have been obvious to one having ordinary skill in the art to include a backup input system as a keyboard or input panel as taught by *LaRue* in the human-computer interaction system of *Takebayashi et al.* to improve and enhance the flexibility of a man-machine interaction for a speech recognition system.

Concerning claim 16, *Takebayashi et al.* omits automatic adaptation after a form is filled in and sent for search in a database. However, it is generally well known to provide adaptation to a user's voice for a voice recognition system during downtime once a processing session is completed. *LaRue* teaches automatic adaptation of a word recognition procedure to individual users. (Column 3, Lines 39 to 42; Column 10, Lines 64 to 67; Column 13, Lines 28 to 30) It would have been obvious to one having ordinary skill in the art to perform automatic adaptation as suggested by *LaRue* after conclusion of an ordering session in *Takebayashi et al.* for the purpose of adapting a voice of an individual user when the processor is not active.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Takebayashi et al. in view of *Cornelison*.

Takebayashi et al. omits letters and numbers for a license plate as field-specific values. However, *Cornelison* teaches a parking ticket enforcement system allowing for the search of license plates by key words of letters and numbers through voice input from a police officer. (Column 7, Line 11 to Column 8, Line 39) This is desirable to provide a police officer on duty the capability of conveniently and effectively determining whether or not an observed vehicle has been associated with criminal activity. (Column 1, Lines 39 to 48) It would have been obvious to one having ordinary skill in the art to apply the word lattice and frame format in the voice data entry of *Takebayashi et al.* to recognize letters and numbers of a license plate as taught by *Cornelison* for the purpose of providing a police officer on duty the capability of conveniently and effectively determining whether or not an observed vehicle has been associated with criminal activity.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Takebayashi et al. in view of *Richards*.

Takebayashi et al. omits full duplex dialogue interaction with speech recognition and auditory feedback. However, full duplex interaction is well known for interactive voice response (IVR) systems, generally. Particularly, *Richards* teaches a sound card for analogous art game software, where the sound engine is capable of running in a full

duplex mode to generate sound while concurrently receiving spoken utterances.

(Column 6, Lines 39 to 56: Figure 1B) It is suggested that full duplex capability provides greater flexibility for interactive voice response (IVR) systems so that a user need not wait for the system to cease generating sound before the user begins to talk. It would have been obvious to one having ordinary skill in the art to utilize full duplex dialogue interaction with speech recognition and auditory feedback as suggested by *Richards* in the speech dialogue system of *Takebayashi et al.* for the known purpose of providing greater flexibility for interactive voice response (IVR) systems.

Response to Arguments

Applicants' arguments filed 17 January 2005 have been fully considered but they are not persuasive.

Applicants argue generally that *Takebayashi et al.* does not teach all the limitations of independent claims 1 and 10, as amended.

However, Applicants cite mainly the amended claim limitations of independent claim 1, but note only, "Independent claim 10 recites similar subject matter."

Here, independent claims 1 and 10, and dependent claim 25, raise new issues of indefiniteness under 35 U.S.C. 112, 2nd ¶, as necessitated by amendment, due to the added term "exactly".

Moreover, the extensive changes to independent claim 1, directed to limitations of natural speech pauses and populating a license plate number field, now present

allowable subject matter, subject to amendment to overcome the rejection under 35 U.S.C. 112, 2nd ¶.

Independent claim 10 remains anticipated by *Takebayashi et al.* There are at least some instances where “the audio feedback exactly reflects a sequence of spotted words” in *Takebayashi et al.* If a user orders one hamburger, two coffees, and four large colas, the system echoes back an audio response, saying “Your orders are one hamburger, two coffees, and four colas, right?” (Column 13, Lines 36 to 50) The fact that *Takebayashi et al.* provides an audio response additionally containing the words, “Your orders are” and “right?” should not be taken to imply that the audio feedback fails in any degree of exactness. One having ordinary skill in the art could conclude that the audio feedback of *Takebayashi et al.* is “exact” simply because the ordering sequence of the items is preserved and the same items are recited in the response as were present in the original order. Thus, *Takebayashi et al.* anticipates independent claim 10, as amended.

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). Here, the term “exactly” should be accorded a broadest reasonable interpretation. Although the claims are interpreted in light of the specification, limitations from the

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specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, the rejections of claims 1, 2, 4 to 14, and 16 to 26 under 35 U.S.C. 112, 2nd ¶; of claims 10, 13, 14, 17, 19, and 20 under 35 U.S.C. 102(b) as being anticipated by *Takebayashi et al.*; of claims 11, 12, and 16 under 35 U.S.C. 103(a) as being unpatentable over *Takebayashi et al.* in view of *LaRue*; of claim 18 under 35 U.S.C. 103(a) as being unpatentable over *Takebayashi et al.* in view of *Cornelison*; and of claim 22 under 35 U.S.C. 103(a) as being unpatentable over *Takebayashi et al.* in view of *Richards*, are proper.

Allowable Subject Matter

Claims 1, 2, 4 to 9, 21, and 23 to 24 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 25 and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding independent claim 1, the prior art of record does not disclose or reasonably suggest the combination of populating a license plate number field of a form, separating blocks of text from input utterances by natural speech pauses, and echoing

blocks of text back to a speaker. *Takebayashi et al.* discloses populating fields of a form from blocks of text for input utterances, and echoing blocks of text back to a speaker, where recognized words can be values or commands. *Cornelison* suggests an application of speech recognition to license plate numbers and letters. However, the combination of *Takebayashi et al.* and *Cornelison* still omits separating blocks of text from input utterances by natural speech pauses. Applicants' Specification, Pages 11 to 12, Paragraph [0025], discloses that separating pauses between "Adam Boy" and "Charley" causes a recognizer to output two blocks "AB" and "C". The prior art of record does not disclose or reasonably suggest separating blocks of text from input utterances by natural speech pauses in combination with populating a license plate number field of a form and echoing blocks of text back to a speaker.

Regarding claim 25, the prior art of record does not disclose or reasonably suggest the combination of populating a license plate field, separating blocks of text by natural speech pauses, and audio feedback echoing. *Takebayashi et al.* discloses populating fields of a form from blocks of text for input utterances, and echoing blocks of text back to a speaker. *Cornelison* suggests an application of speech recognition to license plate numbers and letters. However, the combination of *Takebayashi et al.* and *Cornelison* still omits separating blocks of text from input utterances by natural speech pauses. Applicants' Specification, Pages 11 to 12, Paragraph [0025], discloses that separating pauses between "Adam Boy" and "Charley" causes a recognizer to output two blocks "AB" and "C". The prior art of record does not disclose or reasonably suggest separating blocks of text from input utterances by natural speech pauses in

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combination with populating a license plate number field of a form and audio feedback echoing.

Conclusion

Applicants' amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
4/28/05

Martin Lerner
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Group Art Unit 2654